

CST Technical Specification

Specification for Radio Broadcasting Equipment

Document Number: RI121
Revision: Issue 02
Date: October 2023

This technical specification is issued by The Communications, Space and Technology Commission in the Kingdom of Saudi Arabia in accordance with the provisions of the Communications and Information Technology Act issued by Royal Decree No. (M/106) dated 02/11/1443 AH and its bylaw, and the Commission's regulation.

Communications, Space and Technology Commission (CST)
P.O Box 75606 – Riyadh 11588 - Kingdom of Saudi Arabia

Telephone: + 966 1 14618000
Fax: + 966 1 14618120
E-mail: info@cst.gov.sa
Website: www.cst.gov.sa

Document History Table

Version	Issue Date	Description
Issue 1	July 2021	Merging of specifications RI029, RI030, RI086, RI087, RI088, and RI109
Issue 2	October 2023	

Table of contents

1- Scope.....	4
2- Enforcement.....	4
3- General Requirements.....	5
4- Limits and conditions.....	6
5- Licensing Requirements.....	8
6- Additional Requirements.....	8
7- References.....	9

1- Scope

This specification applies to

- 1-1 Amplitude Modulation (AM) Broadcast equipment
- 1-2 Frequency Modulation (FM) Broadcast equipment
- 1-3 Digital Audio (DAB) Broadcasting equipment
- 1-4 Digital Video (DVB) Broadcasting equipment
- 1-5 Digital Radio Mondiale (DRM) equipment
- 1-6 DAB, DVB and DRM Broadcasting Receivers

2- Enforcement

- 2-1 This specification shall enter into force from issue date.
- 2-2 Any previous version of this technical specification is withdrawn.

3- General Requirements

- 3-1 All equipment must comply with the requirement of CST specification GEN001, be safe and must not adversely affect other electrical equipment.
- 3-2 All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CST. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. Please visit CST website for details.
- 3-3 If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.
- 3-4 Further information on the characteristics and presentation of network interfaces can be obtained by coordinating with the mobile network operators.
- 3-5 It is mandatory that test reports are obtained from a laboratory that has been accredited by a body that is a member of the ILAC Mutual Recognition Arrangement.

4- Limits and conditions

Testing should be carried out to ensure compliance with the listed specifications.

Frequency band	Max Output Power or Magnetic Field	Usage	Standard	Comment
148.5 – 283.5 kHz	50mW	DRM	EN 302 245-2 EN 301 489-11	A spectrum license is required.
526.5 – 1606.5 kHz	50mW	DRM	EN 302 245-2 EN 301 489-11	A spectrum license is required.
526.5 – 1606.5 kHz	Subject to licensing	AM broadcasting	EN 302 017 EN 301 489-11	A spectrum license is required.
2300 – 2498 kHz	Subject to licensing	AM broadcasting	EN 302 017 EN 301 489-11	A spectrum license is required.
47 – 68 MHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
47 – 68 MHz	Subject to licensing	DAB	EN 302 077 EN 301 489-11	A spectrum license is required.
174 – 230 MHz	Subject to licensing	DAB	EN 302 077 EN 301 489-11	A spectrum license is required.
174 – 230 MHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
(2.3 - 2.498) (3.2 - 3.4) (3.950-4)	50mW	DRM	EN 302 245-2 EN 301 489-11	A spectrum license is required.

(4.750 - 4.995) (5.005-5.060) (5.9 - 6.2) (7.2 - 7.450) (9.4 - 9.9) (11.6 - 12.10) (13.57 - 13.87) (15.1-15.8) (17.48 - 17.90) (18.9 - 19.02) (21.45 - 21.85) (25.67-26.1) MHz				
470 – 614 MHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
11.6 – 12.1 MHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
148.5 – 283.5 kHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
526.5 – 1606.5 kHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
2.3 – 27 MHz	Receiver only	DAB, DVB and DRM Broadcasting Receivers	EN 55013 EN 55020 SASO 2938	
87.5 – 108 MHz	Subject to licensing	FM broadcasting	EN 302 018 EN 301 489-11	A spectrum license is required.

5- Licensing Requirements

Spectrum license is required as per above table.

6- Additional Requirements

For Broadcasting Receivers, the requirements of SASO 2938 Technical specifications of the radio, digital and analog broadcasting receiver for (AM/FM/T-DAB+) apply.

7- References

The following referenced documents are indispensable for the application of this document. If no issue or revision number is quoted along with the title of a technical specification or standard, the latest published version should be used.

EN 55013

Sound and television broadcast receivers and associated equipment –
Radio disturbance characteristics – Limits and methods of measurement

EN 55020

Sound and television broadcast receivers and associated equipment –
Immunity characteristics – Limits and methods of measurement

EN 302 017-2

Electromagnetic compatibility and Radio spectrum Matters (ERM);
transmitting equipment for the Amplitude Modulated (AM) sound
broadcasting service; Part 2: Harmonised EN under article 3.2 of the
R&TTE directive.

EN 302 018-2

Electromagnetic compatibility and Radio spectrum Matters (ERM);
transmitting equipment for the Frequency Modulated (FM) radio
broadcast service; Part 2: Harmonised EN under article 3.2 of the R&TTE
directive.

EN 302 077

Transmitting equipment for the Digital Audio Broadcasting (DAB) service;
Harmonised Standard for access to radio spectrum

EN 302 296

Digital Terrestrial TV Transmitters; Harmonised Standard for access to radio spectrum

EN 301 489-1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

EN 301 489-11

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 11: Specific conditions for terrestrial sounds broadcasting service transmitters.

EN 301 489-14

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 14: Specific conditions for analogue and digital terrestrial TV broadcasting service transmitters

SASO 2938

Technical specifications of the radio, digital and analog broadcasting receiver for (AM/FM/T- DAB+)